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Juang-hwan Choi

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EXAMINER

HENN, TIMOTHY J

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/790,780	<b>Applicant(s)</b> CHOI, JUANG-HWAN	
	<b>Examiner</b> Timothy J. Henn	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7 and 15-23 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 06 March 2008 have been fully considered but they are not persuasive. Applicant argues that Endsley only discloses configurations for controlling the image sensor and does not disclose configurations for at least two data transfer modes. While it is true that Endsley discloses a first mode for video capture and a second mode for still image capture (e.g. Table 2), it is noted that these modes alter the manner in which data is transferred from the camera to the host. For example, Endsley discloses a first mode in which continuous images are captured and sent to the host device (Table 2, Configuration 0). In this mode, image data is integrated for a period of 30msec before being transferred (Table 2, Integration time). Endsley further discloses a second mode for capture of a single image (Table 2, Configuration 1) in which image data is integrated for a period of 100msec. Endsley further discloses that the modes can be configured to stop image capture or to return to the same or a different mode after completion of image capture (Table 1, Link field). Since the claims as written do not specifically define the "transfer mode[s]", the configurations of Endsley meet the limitations as claimed. For example, in configuration mode 0 a new image is generated and transferred at a set frame rate in a continuous manner, while in configuration mode 1 a single image is generated and transferred without generating and transferring subsequent images as would be done in configuration mode 1.

2. Since Endsley discloses configuration modes which affect the transfer mode of the system, Applicant's arguments are not considered persuasive and the rejections based on Endsley are maintained.

3. Applicant further argues that a search of claims 8-14 along with claims 1-7 and 15-23 should not create a serious burden since both groups are classified in the same subclass. However, since the invention of claims 8-14 has a materially different design and mode of operation, are mutually exclusive and are not obvious variants, a search for the features of claims 1-7 and 15-23 would not cover the different design and mode of operation of claims 8-14, e.g. a search of claims 8-14 would require searching for a transfer allowance command including a descriptor to be sent from an external device and transferring the descriptor back to the external device while claims 1-7 and 15-23 do not include a transfer allowance command on a descriptor as claimed in claim 8. Therefore, Applicant's arguments are not considered persuasive and the restriction is maintained.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7 and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endsley et al. (US 6,005,613) in view of Wasula et al. (US 2002/0054224).

**[claim 1]**

Regarding claim 1, Endsley discloses a digital camera apparatus (Figure 1) comprising: a main storage unit (Figure 1, Item 38; c. 5, ll. 3-35) for storing a firmware for at least two data transfer modes for transmitting image data acquired through a camera to an external device (Figure 1, Item 12); a mode selection unit for outputting a mode selection signal for a certain transfer mode for the at least two transfer modes (Figure 1, Item 44; c. 6, ll. 3-34; switching to the alternate configuration); a transmitting module for connecting to the external device to transmit the image data to the external device (Figure 1, Item 40), the transmitting module sending the image data in different data transfer manners for each data transfer mode (c. 7, ll. 1-26; in configuration 0 continuous low resolution image data (i.e. a real-time stream) is transferred while in configuration 1 a single piece of high resolution image data is transferred (i.e. not a real-time stream)); and a controlling unit which controls the transmitting module so as to set the transfer mode corresponding to the selected transfer mode if the mode selection signal is received from the mode selection unit (Figure 1, Item 12; c. 6, ll. 3-34), and reads out firmware corresponding to the selected transfer mode from the main storage unit (c. 5, ll. 2-35; c. 6, ll. 3-34) wherein the controlling unit allows the firmware to transmit if a transfer allowance command is received from the external device (c. 3, l. 66 - c. 4, l. 19; i.e. a token). Endsley further discloses sending configuration and status

data to the external device (c. 8, l. 51 - c. 9, l. 40), but does not disclose reading out a descriptor of the firmware and providing the descriptor to the transmitting module as claimed.

Wasula discloses a camera including image transfer functions (e.g. Figure 2). Wasula further discloses “transfer profiles” (Figures 3A-3C) which a user can select to determine how an image is to be transferred (Figure 4). As the image is transferred, a descriptor of the selected transfer profile is sent to the external device via a transmitting module to instruct the external device how the image is to be handled (Figure 5, Steps 430-460). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include transfer profile options as described in Wasula in the configuration modes of Endsley and to read out and send a descriptor to the external device when images are transferred to instruct the external device how the image is to be handled once transferred.

**[claim 2]**

Regarding claim 2, Endsley discloses a sub-storage unit for storing image data picked up through the camera (Figure 1, Item 34), wherein the at least two data transfer modes include a first mode wherein the image data being currently acquired through the camera is transmitted to the external device in a real-time data stream (c. 7, ll. 1-26; Configuration 0 describes sending motion data or a “real-time data stream”), and a second mode wherein the image data stored in the sub-storage unit is transmitted to the external device (c. 7, ll. 1-26; Configuration 1, since all data captured by the camera is stored in the static ram 34, configuration 1 meets the limitations as claimed), the main

storage unit storing each of the firmware corresponding to the first mode and the second mode (c. 5, ll. 3-36; c. 7, ll. 1-26). Following the teachings of Wasula, identifying information would be included in both configuration 0 and configuration 1, see the rejection of claim 1 for further details.

**[claim 3]**

Regarding claim 3, Endsley discloses selecting between transfer modes, but does not teach the use of OSD processing for performing the selection. Wasula describes selecting between transfer modes using a display device (Figure 1, Item 22) which displays a list of stored transfer modes (Figure 6; i.e. OSD processing) when requested by a display request unit (e.g. the processor; Figure 1, Item 18; Figures 2A and 4) and receives a mode selection signal to select a transfer mode (Figure 2A, 4 and 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include OSD processing to allow a user to select between different transfer modes to inform the user of all available options prior to making a selection.

**[claim 7]**

Regarding claim 7, Endsley in view of Wasula does not disclose recognizing the sub-storage unit as an accessible movable disc in the external device if the external device and the transmitting module are connected. Official Notice is taken that it is well known in the art to recognize storage devices on cameras as removable discs when connected to external device such as computers to allow easy access to the images stored on the camera without requiring special interfacing software to be installed on the

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computer. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize the sub-storage unit of Endsley in view of Wasula as a movable disc as claimed to allow for easy access to data stored on the sub-storage unit on any computer the camera is connected to.

**[claim 15]**

Regarding claim 15, Endsley discloses a digital imaging apparatus (Figure 1) for transferring image data being acquired through a camera to an external device connected via a transmitting module (Figure 1, Item 40), comprising: a sub-storage unit for storing the image data being acquired through the camera (Figure 1, Item 34); a main storage unit for storing a firmware for a first mode wherein the image data being currently acquired through the camera is sent to the external device in a real-time stream (Figure 1, Item 38; c. 5, ll. 3-35; video or continuous) and a firmware for a second mode wherein the image data stored in the sub-storage module is sent to the external device (Figure 1, Item 38; Figure 1, Item 38; c. 5, ll. 3-35; still); a mode selection unit for applying a mode selection signal for a certain transfer mode of a first mode and a second mode (Figure 1, Item 44; c. 6, ll. 3-34; switching to the alternate configuration); and a controlling unit (Figure 1, Item 38). Endsley further discloses sending configuration and status data to the external device (c. 8, l. 51 - c. 9, l. 40), but does not disclose sending identifying information of the firmware corresponding to the selected mode to the external device as claimed..

Wasula discloses a camera including image transfer functions (e.g. Figure 2). Wasula further discloses "transfer profiles" (Figures 3A-3C) which a user can select to



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determine how an image is to be transferred (Figure 4). As the image is transferred, a descriptor of the selected transfer profile is sent to the external device via a transmitting module to instruct the external device how the image is to be handled (Figure 5, Steps 430-460). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include transfer profile options as described in Wasula in the configuration modes of Endsley and to send identifying information of the selected mode to the external device when images are transferred to instruct the external device how the image is to be handled once transferred.

**[claim 16]**

Regarding claim 16, Endsley discloses selecting between transfer modes, but does not teach the use of OSD processing for performing the selection. Wasula describes selecting between transfer modes using a display device (Figure 1, Item 22) which displays a list of stored transfer modes (Figure 6; i.e. OSD processing) when requested by a display request unit (e.g. the processor; Figure 1, Item 18; Figures 2A and 4) and receives a mode selection signal to select a transfer mode (Figure 2A, 4 and 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include OSD processing to allow a user to select between different transfer modes to inform the user of all available options prior to making a selection.

**[claim 17]**

Regarding claim 17, Endsley discloses a transmitting module applied with a universal serial bus interface (Figure 1, Item 40).

**[claim 18]**

Regarding claim 18, Endsley in view of Wasula discloses an apparatus wherein if the identifying information of the firmware is transferred to the external device and the execution command for the selected mode is received from the external device is received, the controlling unit allows the firmware corresponding to the selected certain mode to be executed (Wasula, Figure 3A-3C; Endsley, e.g. Table 2). The examiner notes that if, for example, a video mode is set and a still picture is taken, the identifying information for the still picture firmware would be sent and received. If a second still picture capture operation is then ordered from the external unit (e.g. Figure 3 of Endsley shows that mode changes can be made from the external unit), an "execution command" would be sent and executed by the controlling unit of the of the camera as claimed.

**[claim 19]**

Regarding claim 19, Endsley in view of Wasula does not disclose recognizing the sub-storage unit as an accessible movable disc in the external device if the external device and the transmitting module are connected. Official Notice is taken that it is well known in the art to recognize storage devices on cameras as removable discs when connected to external device such as computers to allow easy access to the images stored on the camera without requiring special interfacing software to be installed on the computer. Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to recognize the sub-storage unit of Endsley in view of Wasula as a movable disc as claimed to allow for easy access to data stored on the sub-storage unit on any computer the camera is connected to.

**[claim 20]**

Regarding claim 20, Endsley discloses a method for selecting a data transfer mode of a digital imaging apparatus (Figure 1) transferring image data being acquired through a camera to an external device connected via a transmitting module (Figure 1, Item 40) comprising the steps of: storing the image data being acquired through the camera (Figure 1, Item 34 stores the output from the image sensor); selecting a certain mode among a first mode wherein the image data being currently picked up through the camera is sent to the external device in a real-time data stream (Figure 1, Item 38; c. 5, ll. 3-35; video or continuous) and a second mode wherein the image data that is stored in advance is sent to the external device (Figure 1, Item 38; Figure 1, Item 38; c. 5, ll. 3-35; still). Endsley further discloses sending configuration and status data to the external device (c. 8, l. 51 - c. 9, l. 40), but does not disclose sending identifying information of the firmware corresponding to the selected mode to the external device as claimed..

Wasula discloses a camera including image transfer functions (e.g. Figure 2). Wasula further discloses "transfer profiles" (Figures 3A-3C) which a user can select to determine how an image is to be transferred (Figure 4). As the image is transferred, a descriptor of the selected transfer profile is sent to the external device via a transmitting module to instruct the external device how the image is to be handled (Figure 5, Steps 430-460). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to include transfer profile options as described in Wasula in the configuration modes of Endsley and to send identifying information of the selected mode to the external device when images are transferred to instruct the external device how the image is to be handled once transferred.

**[claims 21-23]**

Claims 21-23 are method claims corresponding to apparatus claims 16-18. Therefore, claims 21-23 are analyzed and rejected as previously discussed with respect to claims 16-18.

***Allowable Subject Matter***

6. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571)272-7310. The examiner can normally be reached on M-F 11-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J Henn/  
Primary Examiner, Art Unit 2622